

ZSC-1000*plus*

USER MANUAL



ZSC-1000*plus*

CCTV System Controller

Issue 18

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Introduction

Thank you for purchasing Meyertech's ZSC-1000. Please read this user guide prior to using this product. It will help you to achieve the maximum benefit from the product. The manual covers installation, operation and maintenance of a ZSC-1000.

What is a ZSC-1000?

A ZSC-1000 is part of the ZoneVu Site Controller family.

This manual covers all of the site controller family:

- ZSC-1000
- ZSC-1000plus
- ZSC-500

The ZSC-1000plus is the generic replacement to the ZSC-1000.

KEY FEATURES

- Local Site Management
- Intersite communications
- Alarm handling
- System backup
- Third party control interfaces

The features described in this manual refer to :

Version 3.35.0.0 of the ZSC-1000 firmware

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Overview

The ZSC-1000 is primarily a unit for distributing telemetry and control information. However, as the distributor of this information, it also uses this opportunity to add functionality and flexibility to the system.

The unit has a number of external ports, all of which have primary functions described below.

Due to the flexibility of the ZSC-1000, with careful design an installer can tailor the application of each port to meet his requirement.

ZVK Port

This port is used for communications within the control room. Generally local equipment that is either generating control commands or within the control room receiving control commands.

Examples of such equipment are keyboards, multiplexer and VCR interfaces, and contact alarm input cards.

ZVM Port

This port is used for communication to matrices. As a core item of equipment, the matrix has a dedicated port.

Intersite Port

This port is used for communications between sites and control rooms. It is very rare that this port has an application for anything other than connection to another site controller.

ZVR Ports

These ports are used for communications with telemetry receivers and / or domes situated external to the control room.

The four ports can be driven independently.

PC1 Port

This port is used for communications with 3rd party equipment that, generally, operates independently of an operator.

Examples of such equipment are Rugby Clocks, Alarm Panels and Help Points.

PC2 Port

This port is primarily used for communications with Meyertech diagnostic and configuration equipment. It has a number of secondary uses:

- An input for Meyertech Series 2 alarms.
- An interface to Fusion.
- An interface to third party equipment.

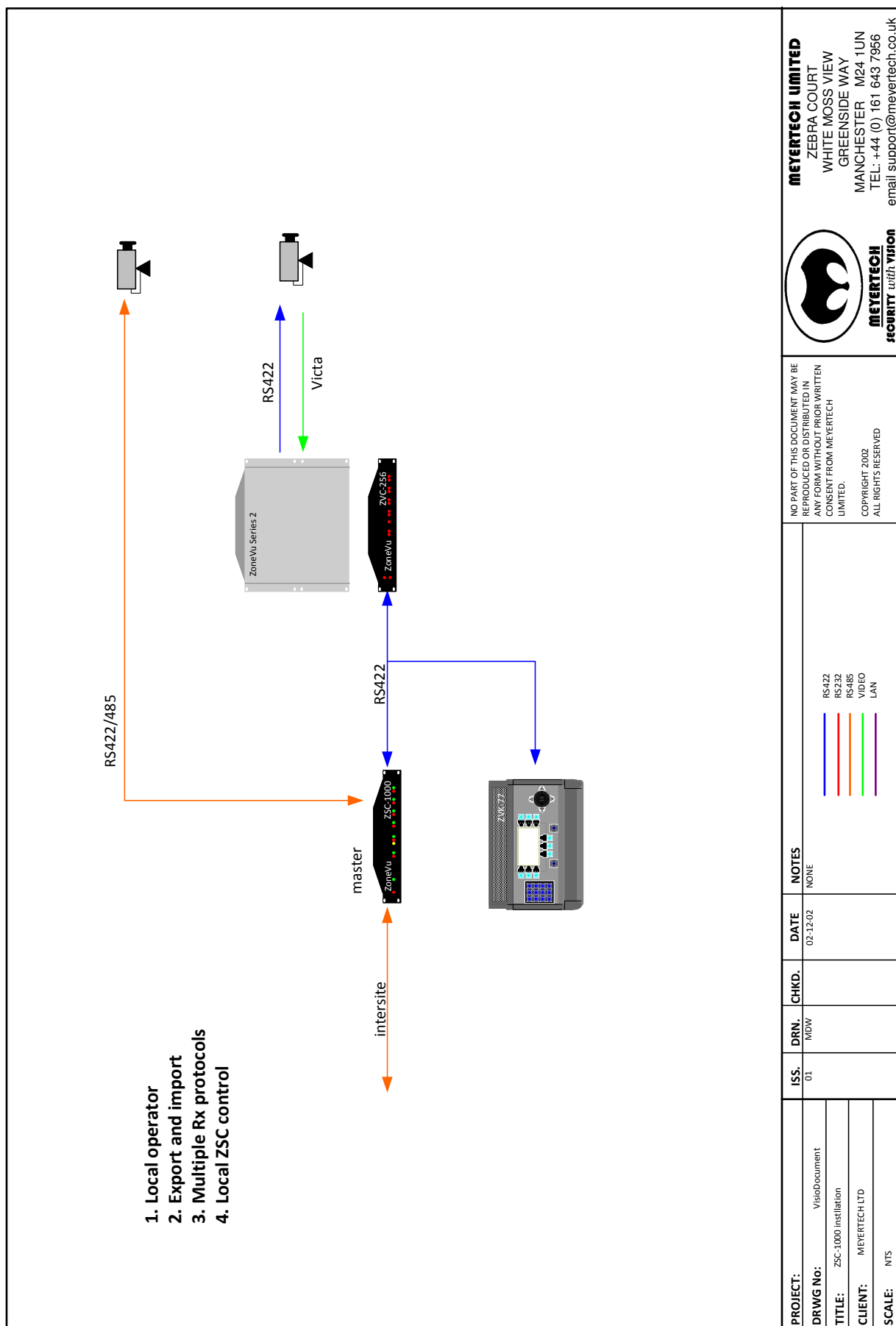
Interface to 3rd party Equipment

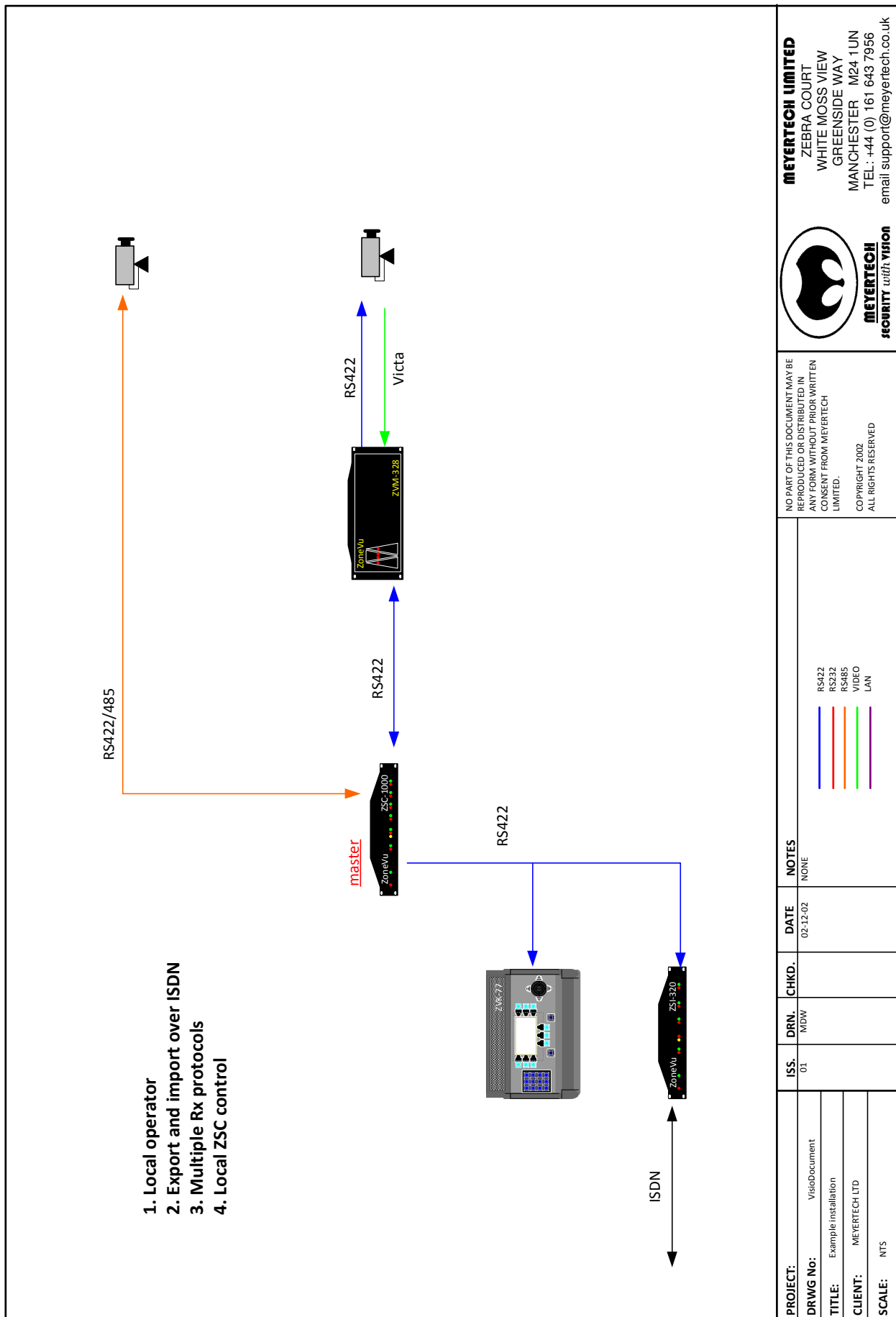
The interface operates in the same way as a ZSC-250.

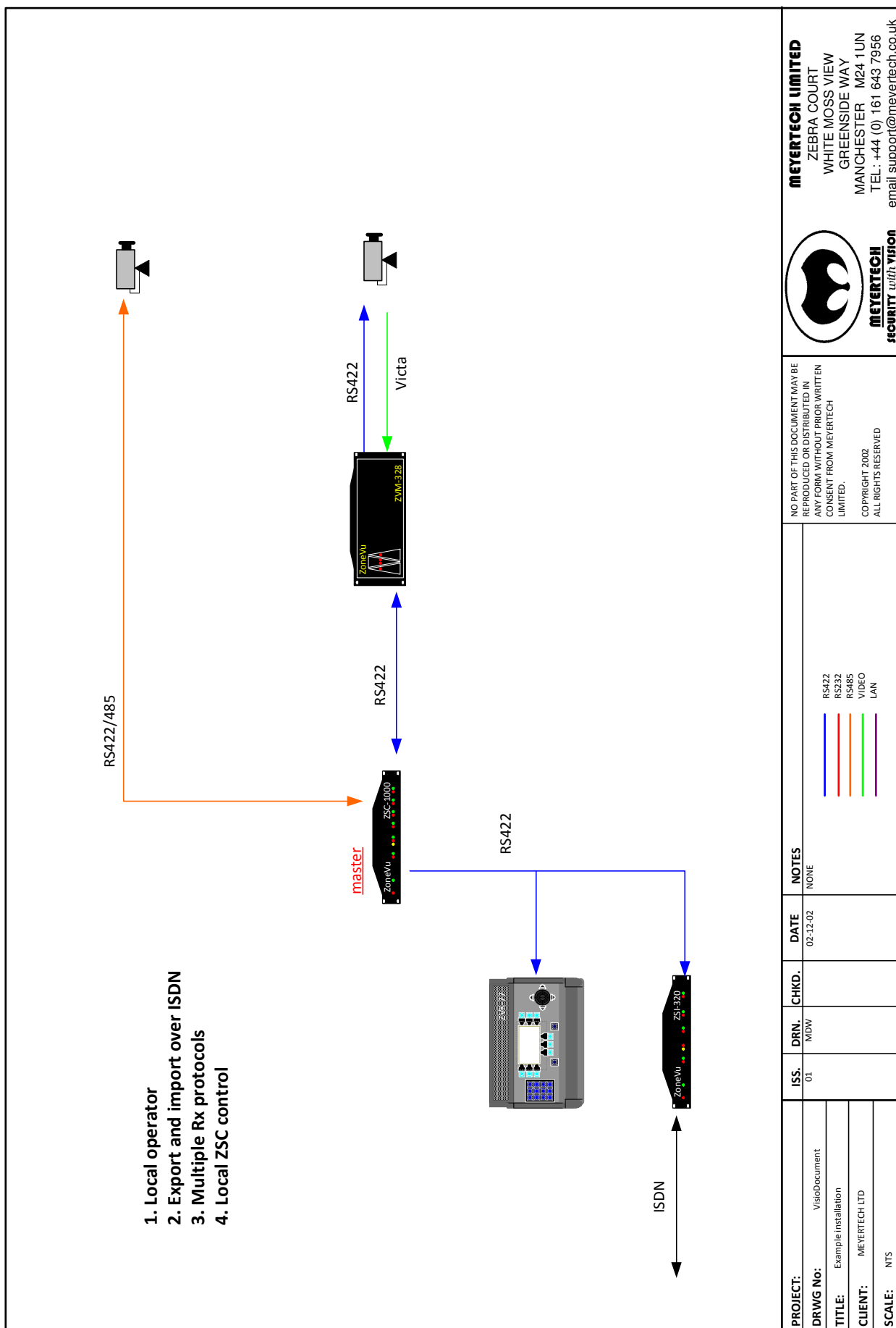
The communications protocol supported on the PC2 port is documented in the published ZoneVu protocol documents.

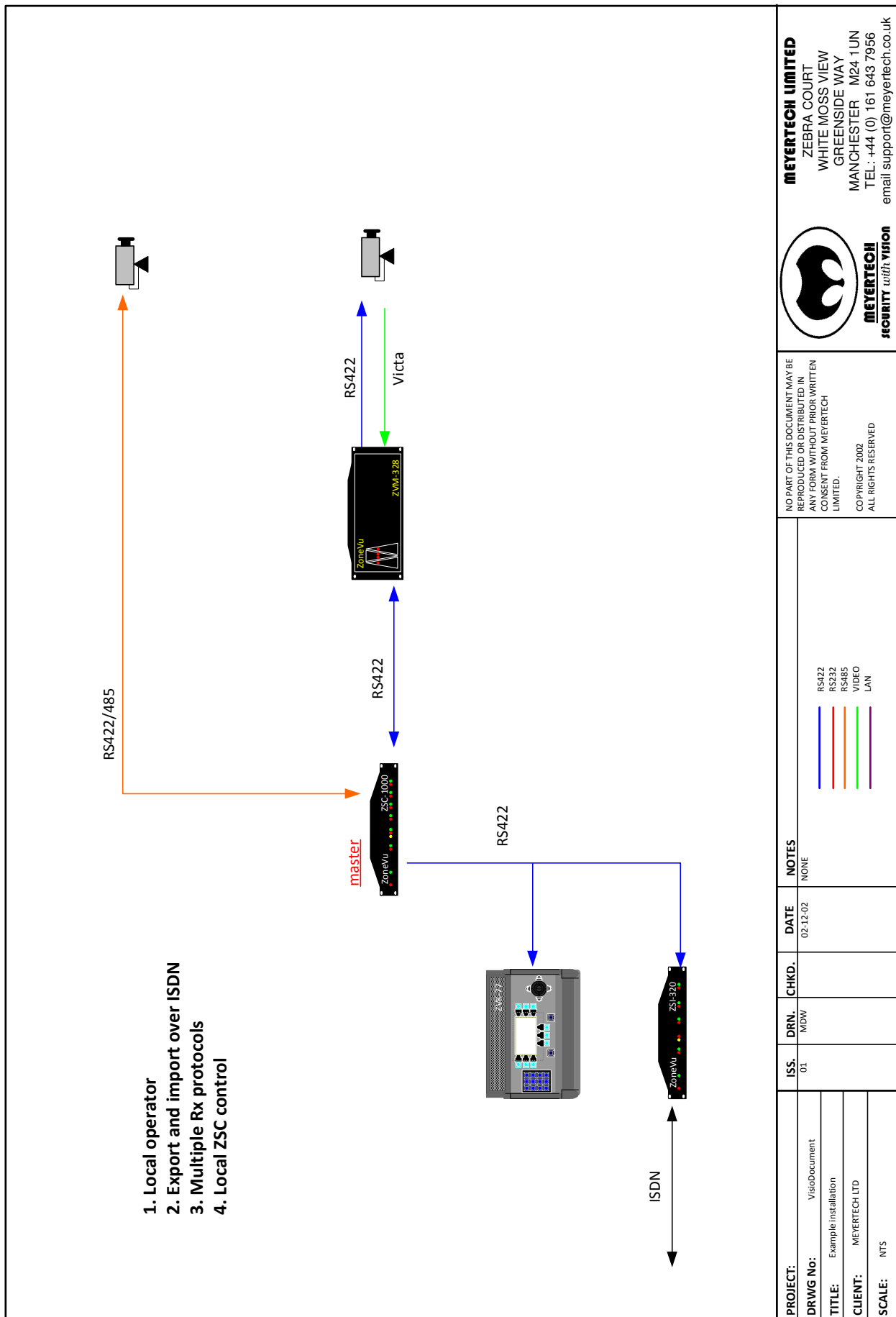
It is requirement to log on to the site controller using an Equipment Identification Key.

Keys and protocol are available by request from Meyertech Ltd.









Features

Multi-site Operation

Intersite connections can be used to integrate separate CCTV systems in order to share their resources. An intersite connection consists of a data link for exchanging commands, and one or more Video paths for switching video between sites.

Data

The most common method of connecting two site controllers is with an RS485 half-duplex serial bus.

- this is the default connection used to carry all commands to and from a remote site
- connects from the intersite port (In or Out) of one controller to the intersite port (In or Out) of another.
- In and Out connections are bridged internally to allow easy wiring of many controllers in a chain.

Where only a simplex RS485 or RS422 connection is available to a remote site, this may be used for the intersite connection with some loss of functionality.

- control negotiation will not take place between local & remote operators
- status will not be available of latched functions (e.g. wipe, lamp) on remote receivers
- *Uncontrolled telemetry* must be set in the *Enables* section at the remote site
- remote site must be set to *Rx only* in it's *Intersite Port* section
- a site controlling such a remote, must have it marked as *Simplex* in it's *Site Routing* section

Alternatively, point to point connections can be made between sites over RS232 using the PC2 or PC1 ports.

- the site number of a remote connected in this way should be marked in the *Site Routing* section of the configuration as *Route through PC1 Port* or *Route through PC2 Port*.

Sites integrated together using Meyertech dial-up equipment (such as the ZSI-320 ISDN interface) are connected and configured differently. See section below on Dialup sites.

Video

Video connections between sites are referred to as *trunks* and are managed transparently by the site controllers. A trunk is normally fed from an output of the matrix at one site (A) to an input on the matrix at a second site (B). This trunk must then be configured under *Output trunks* at site A, and *Input trunks* at site B.

When an operator selects a remote site, the first available trunk is displayed on his monitor, and used for subsequent camera selections from that site

- a trunk is classed as available if it is not currently being displayed on any monitor
- if all trunks are in use, the least recently switched trunk is displayed and the operator notified 'Trunk Denied'
- When a trunk is denied, the operator has the option to override this; his camera selection will then replace that viewed on the other monitor using the trunk.
- if *Camera Mapping* is used to select remote cameras without entering the site, the trunk is automatically assigned at each switch. If a trunk is already viewing the chosen camera, it will be favoured to save capacity.

A site with no matrix, can be setup to display input trunks directly on monitors. The correct trunk will be selected according to the monitor used.

- configure each monitor separately under the *matrix* configuration section (see below), assigning each a single input number
- configure each *input trunk* with the input number assigned to it's monitor above

Dialup sites

Connections made over dialup links, are managed automatically by the site controller.

All cameras connected this way, whether connected individually or through a remote matrix, are selected using a remote site number.

Each remote connection (video & data) provided by a ZSI-320 or similar dialup device is configured as a separate input trunk. The MAC address of the dialup device is entered in the *input trunk* configuration, marking it as a dialup trunk.

Where a dialup device is used to connect to multiple sites, the *input trunk* is configured with any of the remote site numbers. The other sites using the dialup device are indicated in the *Dialup Sites* section.

Dialup trunks are connected on demand. When a dialup site is selected, the first unused dialup trunk is displayed and the remote site automatically dialled. The connection will be maintained until the trunk is no longer displayed i.e. the operator has selected a different site.

Multiple Matrixes

It is not considered normal within the Zonevu system to assign multiple separate matrixes to the same controller. Rather they would normally be assigned to their own controller & viewed as a separate site (see Multi-site Operation above).

It is possible however to assign multiple matrixes of certain types to a single site.

In the matrix list, each matrix is given a unique monitor range and usually a unique camera range also.

The controller will then match the monitor & camera ranges selected to the correct matrix. If there is an overlap, both matrixes will be switched.

Linking multiple matrixes

Where more than one matrix is being used on a site, it is possible to make 'trunk' connections between them to allow the inputs from one, to be viewed on the outputs of the other.

These trunk connections must be configured in both the Input & Output trunk tables in order that the controller can automatically assign them, to save the operator having to make two switches to view a camera.

This is setup in the same way as remote video trunks except that the site number of each trunk in the input & output trunk tables must match the site number assigned to the controller (on the Intersite Port setup).

Camera Mapping

Where a system has been split between multiple sites, but it is desirable to mask this architecture from the operator, Camera Mapping can be used to give the appearance of a traditional system. It can also be used to accommodate non-standard camera numbering or remote connection schemes.

Masking remote site numbers

A Range of camera numbers (usually those that are beyond the range of the local matrix), can be used to reference cameras at another site. This removes the need for the operator to select a site number, and the keyboards can have their site selection disabled.

Using this method of selecting remote cameras allows the controller to make better use of capacity by re-using trunks if different operators choose the same remote camera. The operator has no control over or knowledge of the trunk used, and will not be warned before overriding a trunk when all are in use.

Where the trunks from a remote site are not fully switched it may be necessary to specify different trunks for different camera ranges. This could arise where trunks are fed from separate matrixes or multiplexers at a remote site. To accommodate this the trunk number can be specified for a camera range instead of the site number. The site number being mapped to is implied through the trunk configuration.

Re-numbering cameras

A further use of the Camera Mapping is to alter the camera numbering scheme within a site. A range of camera numbers may be mapped to a different range within the same site, by mapping to site 0.

Camera Mapping can be used to re-number both camera selection and control. By re-numbering one without the other mismatches between the telemetry address of a receiver & the matrix input number it connects to can be corrected. However to ensure full functionality, Meyertech recommends that such offsets are not introduced into a system.

Scope

The camera mapping tables are applied to commands received from a local or remote operator.

Commands generated automatically by the site controller are mostly not subject to mapping and are configured with the actual matrix input, or telemetry addresses. These include:

- Trunk inputs / outputs
- Camera barring
- Camera alarms: both configuration & reporting of camera alarms is based on the receiver address
- Receiver setup

The following exceptions will accept mapped camera numbers in the configuration, and will adjust them as necessary:

- Alarm Events
- Timed Events
- Sequences

Prioritised camera control

Each keyboard (or PC) attached to the controller is configured with a priority level for camera control. When two keyboards try to control the same camera, the controller will grant control to the higher priority keyboard or, if the priorities are the same, the first keyboard to attempt to control the camera.

If two keyboards on different sites try to control the same camera the same method is used in assigning control; however the priority levels used are those assigned to the site controllers rather than the keyboards. This intersite priority level is configured in the *Site control* section.

An exception is where a local and remote keyboard are in conflict for use of a local camera. The relative priorities of the site controllers can be overridden using the '*Prioritise local keyboards*' option within the *Enables* section.

The control record for a camera is normally held by the site controller driving its telemetry. However if telemetry is routed through a matrix which has more than one controller attached (i.e. PC or keyboard control direct to the matrix), then the matrix must become the authoritative controller.

This is configured by the *controller* option in the *ZVM Port* section.

When an operator has control of a camera, it will not normally be released until he takes action on the keyboard to do so. However the controller is capable of removing camera control from an operator when the camera has not been used for a given time period. This feature is highly recommended where operators on a remote site have access to camera control, as it allows automatic release of a camera to the local operator should the remote link fail. Configuration of this is found in the *Site control* section.

Telemetry Distribution

The normal method of telemetry distribution is through the controller's ZVR ports.

The *Camera Telemetry* configuration section can also be used to route telemetry through alternative ports.

- The most common requirement is to make use of the VICTA (down the coax) transmission capabilities of a matrix, by setting the port to ZVM.
- Alternatively PC1 port may be used where a 3rd party telemetry controller is in use

Sequences

Sequencing allows one monitor to display several cameras by automatically cycling through different cameras. Note that a sequence operation is normally associated with a matrix. All Meyertech matrices support running sequences and this feature is intended for running sequences across sites or on 3rd party equipment that doesn't support this feature.

The ZSC extends the sequence functionality by allowing the definition of a preset position for each camera.

The ZSC sequence features:

- 32 configurable sequences
- A maximum of 32 steps in each sequence.
- Each sequence has a configurable dwell time, which affects all the steps in the sequence.

As well as the configurable sequences there is one fixed sequence, which sequences through all the inputs on the primary matrix. This has a configurable dwell time and is selected by choosing sequence 0.

By default all the sequences are disabled (set to zero length), but are configured with cameras 1 to 32 on the local site with a dwell time of 3 seconds, and no presets.

Whilst the sequence is disabled, all sequence commands will be directed to the matrix associated with the selected monitor for actioning.

Once started, each sequence will run until stopped by an operator. Should the power be interrupted to the controller, the sequence/s will re-start at the first position after a short delay.

See later section for details of configuration using Mpower.

It is possible to have a mixture of cameras from local or remote sites although it is important that the number of remote sites cameras configured in separate sequences does not exceed the number of trunks.

Operation

Starting A Sequence

A sequence may be selected from the keyboard by selecting the desired monitor and then selecting the sequence you wish to run on that monitor. When a sequence is started all the sequences are synchronised. The purpose of this is so that sequences with the same dwell time switch synchronously. The user will see all running sequences return to their first position.

It is possible to have 32 sequences running at the same time, though to maintain performance it is recommended that no more than 8 sequences are run at any one time.

Preset positions in a sequence

Where the preset number for a step in a sequence is anything other than 255, the site controller will attempt to send the camera to a preset position, as that camera is switched in the sequence.

Control will be requested first, using a priority of 2. If a lower priority keyboard has control of the camera, it will be told to submit. If an equal or higher priority keyboard has control, the preset will not be sent.

As soon as the preset command has been sent, control of the camera will be released.

Manual Advance and Rewind

Whilst sequences are running, it is possible to manually step forward and backwards through the sequences that are running (note that all running sequences advance and rewind at the same time). Stepping through the sequences does not stop them from running.

Stopping A Sequence

A sequence can be stopped by either of 2 methods:

- Select the monitor and then select a camera to display on the monitor. This overrides any sequence that is running on that monitor.
- Select the monitor running the sequence and press the SEQ STOP key (if supported on keyboard).

Timed Events

This feature allows the configuration of certain actions to automatically occur at specified times of the day.

The ZSC timed events feature:

- Up to 128 events.
- Preset event
- Patrol event (Random preset, ordered preset or Mimic)
- Control event (used to lock a camera)
- Alarm event
- Camera switch
- VCR record

Before any camera command is sent, the ZSC will request control of that camera with a fixed priority of 2.

If control is not granted within 3 seconds, the command will not be sent.

Control is released as soon as the command has been sent.

See later section for details of configuration using Mpower.

Embedded Firmware Drivers (EFD)

The ZSC supports an extensive range of 3rd party equipment. These are implemented as Embedded Firmware Drivers (EFD). The required EFDs should be specified at time of purchase.

Due to the continual development of new EFDs the current range of supported equipment and features available can be obtained by requesting the following documents from Meyertech Sales.

Alarm Products: *ZSC-EFD Supported Alarm Protocols*

Matrix Products: *ZSC-EFD Supported Matrix Protocols*

Peripheral Products (Multiplexers, VCRs): *ZSC-EFD Supported Peripheral Protocols*

Receiver Products (Domes, P/T controllers): *ZSC-EFD Supported Receiver Protocols*

Alarm Handling

Alarm definition

An alarm is individually identified by three values:

- Alarm Type** Alarms are classified in three different types
Camera: all alarms generated at a camera receiver
Panel: alarms generated by contact alarm, or third party serial alarm panels
Peripheral: alarm generated by various types of Meyertech peripheral equipment, e.g. Vcr interfaces, remote site interfaces.
- Alarm Device** The alarm device usually indicates the address of the device generating the alarm, depending on the type of the alarm. Device 0 represents all devices of a particular type (i.e. global mapping)
- Alarm Number** The actual number of the alarm circuit on the alarmed device. Number 0 represents all alarms on a particular device(i.e. global mapping).

Alarm Mapping

Alarm Category	Reporting device e.g.	Type	Device	Number
ZoneVu receiver alarms	ZVR-x30	Camera	Camera address	1 : Tamper alarm 2 – 7 : Contact i/p s 1 – 6 8 : Video fail 9 : Communications fail
ZoneVu Victa alarms	ZVM-Series2 (Note: RS232 Plugged into any PC Port)	Camera	Camera address	1 : Tamper alarm 2 – 7 : Contact alarms 1 – 6 on receiver reported via matrix 8: Video Loss
Matrix Video Loss	All Matrixes	Camera	Matrix input / camera no.	8 : Video fail
Panasonic & JVC dome alarms	ZSC-EFD or ZVS-MSI-48	Camera	Camera address	1 : all dome alarms 9 : Communications fail
Contact alarm rack	ZVA-032	Panel	Alarm card number	Contact number on card 255 : Device fail
Galaxy alarm panel	ZSC-EFD	Panel	1 st digit of Zone number	Remaining digits of zone number
Teltronic Alarm	ZSC-EFD	Panel	6 – 16 6 for help points 1 – 100 7 for 101 – 200 etc	Help point number without the hundreds.
Surguard (MLR2)	ZVS-MSI	Panel	Account code	Zone number (or user number)
Video recorder	ZVS-MSI-23	Peripheral	MAC address of ZVS-MSI	1-3 : Tape Fault channels 1 – 3 4-6 : Tape end Channels 1 – 3 7-9 : Hardware fail Channels 1-3 10-12 : Video loss Channels 1 – 3 13-15 : Comms fail Channels 1 – 3 255 : Device fail
ZVM-328 built in contact alarms	ZVM-328	Peripheral	100	Contact number 1 - 32
Dial-in alarms	ZSI-320	Peripheral	MAC address of ZSI-320	Site number 255 : Device fail
Contact alarm inputs	ZVS-IOM8	Peripheral	MAC address of ZVS-IOM8	Input number 255 : Device fail
Power fail	ZVS3-PSU-xD	Peripheral	MAC address of PSU	1 : PSU A fail 2 : PSU B fail 255 : Device fail
Matrix	ZVS3-VRM	Peripheral	MAC address of ZVS3-VRM + 100	255 : Device fail
Keyboard	ZVK-xxx	Peripheral	MAC address of keyboard	255 : Device fail
Site controller	ZSC-1000 / 500	Peripheral	200	255 : Device fail Site no. indicates which ZSC failed

Configuration

Intersite Port

This port is designated for communication between site controllers at permanently connected sites.

The screenshot shows a configuration window for the Intersite Port. At the top, there are tabs for Intersite Port, PC2 Port, ZVK Port, ZVM Port, ZVR Port, and PC1 Port. The Intersite Port tab is selected. Below the tabs, there are several configuration options:

- Site:** A dropdown menu showing the value '1'.
- Remote Station:** Two radio buttons: 'Duplex' (selected) and 'Rx only' (unselected).
- Baud Rate:** A dropdown menu showing the value '9600'.
- Turnaround Time:** A text input field containing the value '4000'.
- Priority:** Three radio buttons: 'Low' (unselected), 'Medium' (unselected), and 'High' (selected).

Site

The number that defines which site the unit controls. This site number is used as the units address. The range is 1 to 100.

Default = 1

Remote Station

Defines how this unit talks to other site controllers.

Duplex sets the inter-site communications to bi-directional and this site controller will both send and receive messages.

Rx only sets the inter-site communications to simplex and this site controller will only receive messages.

Default = Duplex

Baud Rate

Defines the baud rate at which the inter-site communications occurs.

Valid values are 1200, 2400, 4800, 9600, 19200, 28800, 38400, 57600 and 128000.

9600 is recommended for systems of less than 6 site. Greater than 6 sites should use 19200. With many active sites (i.e. operators at multiple sites controlling remote cameras) 57600 may give a better performance.

Default = 9600

Turnaround Time

Also known as the transmit hold-off time, this configurable delay is designed to maximise compatibility with different transmission media (such as fibre optics, radio etc).

Smaller values allow faster communications between sites, but require the transmission equipment to switch between receive & transmit states quicker.

Value is configured in microseconds in the range 1 to 65535

Default = 4000

Priority

Bandwidth on the intersite port is allocated according to relative priorities.

On networks with more than 16 sites, it is recommended to set the satellite sites to Medium or Low priority, to improve the performance at main control rooms when controlling cameras over the intersite network.

Options : High, Medium or Low.

Default = High

PC2 Port

Intersite Port	PC2 Port	ZVK Port	ZVM Port	ZVF
Baud Rate <input type="text" value="4800"/>				
Audit Mode <input type="checkbox"/>				

Baud Rate

Defines the baud rate at which the PC2 communications occurs.

Valid values are 1200, 2400, 4800, 9600, 19200, 28800, 38400, 57600 and 128000.

Default = 9600

Audit Mode

Select Audit mode only when Fusion Audit ZVK is connected to this port.

Default = Off

ZVK Port

Config Version	Intersite Port	PC2 Port	ZVK Port	ZVM Port
Key		<input type="text" value="0"/>		
Max address		<input type="text" value="0"/>		
polling		<input type="checkbox"/>		

Key

Internal use only – MUST NOT BE MODIFIED

Max address

Unused

Polling

To enable or disable the polling of devices

Default = On

ZVK Extra

Baud Rate

Defines the baud rate at which the ZVK port communications occurs.
Valid values are 1200, 2400, 4800, 9600, 19200, 38400, 57600 and 128000.
Default = 9600

RS485

Future feature to select 2-wire RS485 communications.
Default = Off (4-wire RS422)

Fast Polling

Removes the pacing of commands, to give a slightly faster connection to devices on this port.
May cause problems with some older keyboards
Default = On

ZVM Port

MAC address

The address to which the unit will respond to polls on this port
Default = 1

Terminated

The state of the 120R line terminator
Default = On

Polled

To indicate that the unit should expect to be polled. If On the unit will wait for a poll before transmitting any information
Default = Off

Controller

To indicate that the unit is to make the decision on telemetry control from operators. If set to off the unit will forward control request messages to the device on the ZVM port.
Default = On

Baud Rate

Defines the baud rate at which the ZVM port communications occurs.
Valid values are 1200, 2400, 4800, 9600, 19200, 38400.

Default = 9600

Camera Telemetry

Receiver setup

For each camera in the range 1 to 4096 (256 for a ZSC-500 or ZSC-1000) the following can be configured

Port

Which port the telemetry will be broadcast on.

The valid options are zvm, zvr1, zvr2, zvr3, zvr4 or pc1

Defaults

cameras 1-64 = zvr1

cameras 65-128 = zvr2

cameras 129-192 = zvr3

cameras 193-4096 = zvr4

Polled

If enabled the camera at this address will be polled (allows the receiver to return alarm and/or status information)

Default = Off

Reversed

To correct for reversals in individual cameras. Where a direction(s) is reversed tick the appropriate box(es) to translate all command to the camera. E.g. Tick *Pan* to transpose left & right commands.

Default = Off

Port setup

For each ZVR port (1,2,3 and 4) the following can be configured

Mode

The operation of the port either RS422 (2 or 4 wire) or RS485 (2 wire)

Default = RS485

Baud rate

Defines the baud rate at which the ZVR communications occurs.

Valid values are 1200, 2400, 4800, 9600, 19200, 28800, 38400, 57600 and 128000.

Default = 9600

Protocol

The port can be configured to control a number of third party protocols. Those required must be specified at time of order.

Default = ZoneVu

Cmd Gap

The command gap is used to pace the generation of telemetry. Some transmission systems and/or third party equipment cannot except data at too fast a rate. This value is the minimum time that will be allowed in 10 millisecond units between transmission of data packets on this port. Care must be taken on setting this value – if too high a figure is used then the dropping of data packets will occur which may effect the controllability of the attached equipment.

Default = 2

PC1 Port
Protocol

It is possible to control a range of 3rd party equipment from this port. The range includes clocks, switchers, multiplexers and alarm panels. Those required must be specified at time of order.

Default = ZoneVu

Baud Rate

Defines the baud rate at which the PC1 communications occurs.

Valid values are 1200, 2400, 4800, 9600, 19200, 38400.

Default = 9600

Format

Defines the data format : Number of data bits, Parity and number of stop bits.

Valid values are 8N1, 7E1, 7O1, 8E1, 8O1

Default = 8N1

Spot Monitor 1 - 8

This spot monitor setup is used only when a Teltronic or equivalent intercom system is attached.

Each 'Spot Monitor' setting allows a matrix output to be associated with an intercom station. When a station number matching this list answers a call, the associated alarm is automatically accepted onto the Monitor number listed.

Station Number

The number assigned to the operator's call point.

Default = 0

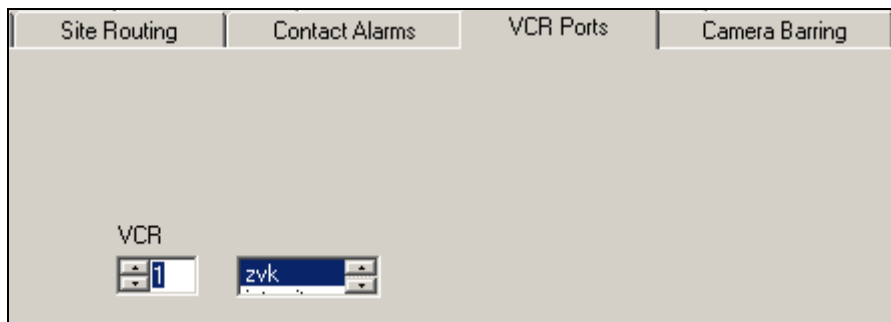
Monitor

The matrix output to display the operator's call on.

Default = 0

VCR Ports

The ZSC-1000 routes commands out to ZVS-MSI units controlling VCRs. These units are normally connected onto the ZVK port. However the ZSC-1000 can be configured to transmit these commands onto another port.



For each VCR, in the range 1 to 90

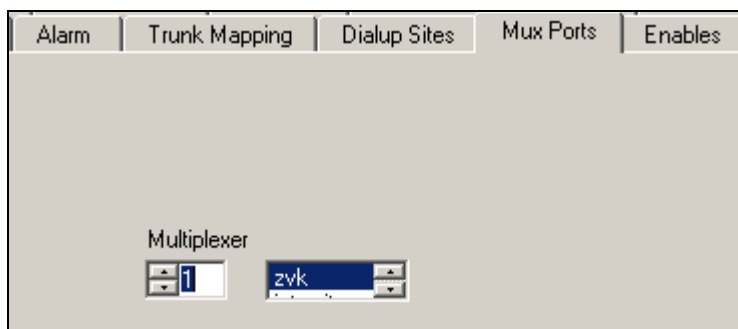
Port

The port used to transmit VCR commands onto.

Default = Zvk

MUX Ports

The ZSC-1000 routes commands out to ZVS-MSI units controlling MUXs. These units are normally connected onto the ZVK port. However the ZSC-1000 can be configured to transmit these commands onto another port.



For each MUX, in the range 1 to 90

Port

The port used to transmit MUX commands onto.

Default = Zvk

Matrix

Matrix

For each matrix, in the range 0 to 19, controlled by this unit the following must be configured

Type

Defines the type of matrix attached. The following options are available, some options enable additional functionality as explained

- **None**
All unused matrices should be set to none
- **ZVM-328**
Standard matrix connected to ZVM port
- **ZVM Series 2**
Standard matrix connected to ZVM port.
Also used for Series 3 matrix.
- **DM S2 (spot)**
Montage (spot)
Use a multiplexer's spot monitor for switching
 - Output size should be set to 1
 - Address is the multiplexer number
- **DM S2 (dig)**
Montage (dig)
Use a multiplexer's digital (multiscreen) monitor for switching
 - Output size should be set to 1
 - Address is the multiplexer number
- **Monitor**
Used where an input is connected directly to a monitor (i.e. no matrix)
This is most commonly used where the input is a trunk line, switched at a remote site
 - Output size should be set to 1
 - Input size should be set to 1
- **ZVM21**
A simple 2 input switcher normally used to display 2 multiplexer outputs on 1 monitor
- **ZVM-328 site**
Used for a slave ZVM-328 matrix which has ability to acknowledge switches
- **PC1 port**
Route switches to the PC1 port
Type of switching used depends on the protocol configuration of PC1 port.
- **Series 2 (site enabled)**
For Series 2 matrixes fitted with the firmware to interface to a site controller.
This option allows confirmation of all switches made.
- **Monitor Bank**
Similar to the 'Monitor' type, this allows trunk inputs to be directly controlled without a matrix.
Input & Output size are not fixed as per the **Monitor** type
- **Series 3 (duplex)**
Standard Series 3 matrix; requires that the matrix be polled.

- **Series 2 – No 256**
Series 2 Matrix, no ZVC-256 controller
ZVK Port must be set to 9600 baud
ZVM Port must be set to 19200 baud, not polled
No Matrix Polling must be selected on Enables tab
- **Virtual Matrix Manager**
Switches are sent on ZVK, PC1 & PC2 ports in Zonevu format

Default = ZVM Series 2 (matrix 0) None (matrix 1 – 19)

1st Input

Input number that the matrix starts at

Default = 1(matrix 0) 0(matrix 1 – 19)

1st Output

Output number that the matrix starts at

Default = 1(matrix 0) 0(matrix 1 – 19)

Input size

Size of the matrix in terms of inputs

Default = 1024(matrix 0) 0(matrix 1 – 19)

Output size

Size of the matrix in terms of outputs

Default = 256(matrix 0) 0(matrix 1 – 19)

Address

Used for addressable matrix types such as multiplexers

Default = 0

Series 2 OSD

This Tab allows configuration of the Series 2 Matrix OSD when not used in conjunction with a ZVC 256

Camera (1 – 352)

Caption

For each matrix input, type a 20 character caption.

The formatting of the caption is controlled by the Monitor section.

Default = Camera 1, Camera 2 etc.

Replacement Parameters

The caption can include one or more 'replacement parameters', which will be substituted with a value when the camera is selected.

These are of particular use for trunk inputs, where one of a number of remote cameras may be displayed on the same matrix input. A fixed caption is of limited use in this case.

Parameters are denoted with a % sign followed by a number to choose the parameter.

- %1 The matrix input number
- %2 The matrix output number
- %3 The camera number as selected by the operator, before any mapping is applied
- %4 The camera number, after any mapping is applied
- %5 The site number of the camera, after any mapping is applied
- %6 The trunk number (or Zero for a local camera)
- %7 The trunk status: 'G'rant, 'D'enied or '-' (no trunk)

Optionally 0n (where n is between 1 and 5) may be placed directly after the % to pad the number with zeros up to a fixed length.

Examples:

Monitor %2 Input %1	: Monitor 10 Input 50
Camera %043	: Camera 0220
Site %5 Camera %4	: Site 2 Camera 20

Osd On

De-selecting this option will remove all text (both caption & clock) from the screen when this input is selected

Default = On

Monitor (1 – 200)

Formatting of OSD for each Monitor

Display

Text Off: No OSD shown
 Time/Date Only: Show clock, but no camera caption
 Caption Only: Show camera caption only
 Time/Date and Caption: Show clock and camera caption

Default = Time/Date and Caption

Position

Select Top for the first line of the screen, Bottom for the last
 Default = Top

Colour

Black or White

Default = White

Input trunks

Input trunks are the video paths from a remote site to this site. For each input trunk, in the range 0 to 383, the following can be defined.

Note : The last trunk should be followed by a 'dummy' entry with site set to 0. Gaps should not be left in the trunk tables as any 'dummy' or blank entries in the list are treated as the end of the list.

Site

The site that the trunk connects

Default = 0

Input

Matrix input at the local site that takes the input trunk

Default = 0

Trunk group

Assign a group between 0 and 16 to restrict usage of a trunk(s) to operators with access rights to that group. Internal events (alarms, sequences etc) & operators without access rights assigned use Group 0.

Default = 0

Dialup address (alternative use of Trunk group)

On older systems, remote sites may be designated as 'Dialup' (see *Dialup Sites*). For trunks from dialup sites, the Trunk group value is used as an address for the dialup device.

Default = 0

Local switch

When this option is selected the remote switch will be processed locally

The *Trunk group* value will be used to select a local matrix definition (by number) to perform the switch

This option should not be used if the site number (that the trunk connects to) is the local site. In this case the switch would automatically be assigned to a local matrix.

Default = 0

Output trunks

Output trunks are the video paths from this site to a remote site. For each output trunk, in the range 0 to 127, the following can be defined.

Note : The last trunk should be followed by a 'dummy' entry with site set to 0. Gaps should not be left in the trunk tables as any 'dummy' or blank entries in the list are treated as the end of the list.

Site

The site that the trunk connects

Default = 0

Output

Matrix output at the local site that feeds the output trunk

Default = 0

Dialup address

If this entry is anything other than 0, then the site controller attempts to connect to the remote site using the dialup device with this address.

If the value is zero, the unit assumes that the connection is permanent.

Default = 0

Local switch

Not Used. This option should be left at it's default value.

Default = 0

Camera Mapping

Camera mapping allows remote cameras to be accessed without having to use a site number. This is particularly useful in older systems where the operator keyboards may not support the selection of sites. It can also be used to assign a different matrix input number and / or telemetry address to the camera number selected by the operator.

See the Camera Mapping description in the Features section of the manual for a more detailed explanation.

Index sets the position of each mapping in the list, starting at 0 up to 255 (or 19 for ZSC-1000 & ZSC-500). The order of mappings is not relevant, however if gaps are left in the list the 'First Camera' should be non-zero if further mappings follow.

Map Video

When enabled, all switches for cameras in the range are re-mapped.
Select this if the matrix input does not match the camera number selected by the operator.
Default = disabled

Map Telemetry

When enabled, all camera control requests and telemetry control for cameras in the range are re-mapped.
Select this if the receiver's telemetry address does not match the camera number selected by the operator.
Default = disabled

First camera

The first local camera number to be used to reference the mapped cameras.
This marks the start of the camera range presented to the operator.
Default = 0

Last camera

The last local camera number to be used to reference the mapped cameras.
This marks the end of the camera range presented to the operator.
Default = 0

First Remote camera

The first camera number in the mapped range. This marks the start of the range of actual matrix inputs and/or telemetry receivers addresses used.
Default = 1

Site Number / Trunk Index

Site number to remap cameras to or Index into Trunk Input table used for remote mapping on a specific trunk. If re-numbering cameras within a site, set the Site Number to Zero.

Default = 0

Trunk

When not selected, cameras are mapped onto a site number; any available trunk will be used if the mapped cameras are remote.

When selected, the specified input trunk is used to set the site number; only the specified trunk will be used.

Default = off

Use Non Default mode

When not selected the camera maps work in all operating modes.

When selected the camera map will only work in the operating mode that has been specified.

Default = off

Operating Mode

Used to specify an operating mode to which the camera map will apply. When the controller is in a different operating mode to that specified, the camera map will be disabled.

The operating mode will only be taken into account if the "Use Non Default mode" box is checked.

To change the operating mode, see the "Set Mode" event, on the alarm events tab.

Default = 1

Dialup Sites

The screenshot shows a software interface with five tabs: 'Alarm', 'Trunk Mapping', 'Dialup Sites', 'Mux Ports', and 'Enables'. The 'Dialup Sites' tab is selected. Inside this tab, there is a 'Site Number' field with a value of 1. Below this, there is a 'Dialup Sites' label and a 'Dialup' checkbox, which is currently unchecked.

Each site in the range 1 to 100 can be configured as a dialup site.

This works in combination with a dialup trunk (Input or Output trunk) setting. All sites set to dialup will share the same dialup trunk(s). As well as dialup sites, this setting is also used more in a more generic sense to indicate that the site is dynamically routed (e.g. when it is dynamically routed over IP using a ZSI-450).

Default = Off

Site Routing

Defines information that is used to describe the communications interface to a remote site.

For each Site 1 – 100 the following site routing table can be set up

Site Routing

- Route through PC1 Port
Commands are routed out of the PC1 port
Default = Off
- Route through PC2 Port
Commands are routed out of the PC2 port
Default = Off
- Simplex
The remote site is operating in simplex mode, indicates to the local unit that it should not wait for a reply from this site.
Default = Off
- Unswitched Trunks
Modifies the behaviour of the input trunks from a site, so that different trunks will be used for different remote cameras, assuming the remote camera number matches the trunk number
Default = Off
- Legacy controller (ZVD-GW1)
Modifies the protocol used to communicate with the remote site controller
Default = Off
- Intersite port IP site
Indicates that the site is on the intersite port but is dynamically routed. This is used in conjunction with the dial up site tick box.
Default = Off
- Through Routing (e.g. TVNP)
Indicates that the site is on a network capable of routing video from many sites through shared input trunks. Currently applies only to the TVNP network.
Default = Off
- Reserved
Internal use only – MUST NOT BE MODIFIED
Default = Off

Site control

Priority

The priority used by all equipment on this site when trying to control remote sites. The priority ranges from 1 to 9.

Default = 1 (lowest)

Timeout

The time period, in seconds, after which exclusive control of a camera is automatically relinquished if it is not moved by an operator.

This timeout is applied to control from both local and remote operators.

Default = 600

Enables

This section allows a number of miscellaneous features to be enabled.

Modification of any of these values should be done with care.

Uncontrolled Telemetry

If enabled telemetry is forwarded to the cameras without the requirement for control authentication.

Default = Off

No matrix polling

If enabled, the matrix on the ZVM port will not be polled for alarms.

Default = Off

24 hour alarms

If enabled the alarm handling is permanently enabled. An alarm disable command will effect only attached alarm panels

Default = Off

Disable ZVR Error Protection

If enabled then this will allow increased flexibility on the operation of 3rd party equipment attached to the ZVR port.

Default = Off

Sequence switch updates

If enabled then sequences running on the site controller will update the keyboards with current cross points. This is disabled by default to prevent excessive data on the ZVK port and to match the functionality of sequences running on a matrix

Default = Off

Enable Multiple ZVM Polls

If enabled then the site controller will reply to polls from the matrix more often, this feature has been added to improve performance of telemetry when routed via the ZVM port. This is disabled by default as telemetry is usually routed via the ZVR ports

Default = Off

Disable ZVM Local Switching

If enabled the site controller will ignore switch confirmations from the Matrix

Default = On

Disable Memory Check

If enabled the site controller will not attempt to automatically recover from memory faults

Default = Off

Prioritised trunk allocation

If enabled input trunks will be allocated based on the operator's priority, instead of the default 'first come first served' basis.

Default = Off

Barred camera input

If enabled the site controller will automatically display a fixed camera input when an operator selects a camera that is barred to them. The input selected is the last on Matrix 0.

Default = Off

Legacy VCR / MUX protocol

Enable this option to gain control of some older Multiplexer / VCR interfaces

Default = Off

Disable auto dialup

Enable this option to prevent the controller automatically issuing 'dialup' & 'hangup' commands to ZSI devices, when dialup trunks are used to view a remote site. Manual dialup is then required by the operator.

Default = Off

Switch over ZSC for Dual Redundancy

Enable this option if this ZSC will be the dual redundancy failsafe controller

Default = Off

Pelco extended address range

Enable this option if you do not require strict compatibility with the Pelco 'P' protocol, and wish to extend the address range for Pelco 'P' telemetry receivers from 32 to 255.

Default = Off

No Proxy control over simplex sites

When requesting control of a camera range that maps to a simplex site, the default behaviour is to validate the request against the local controllers camera range, or if video is mapped through a duplex site to pass the request to it.

This Proxy behaviour can be disabled using this option, whereby the controller simply forwards the request to the simplex site and assumes success.

Default = Off

Block global telemetry

Enable this option to prevent the use of global (all cameras) telemetry commands
Default = Off

Prioritise local keyboards

Enabling this option will override the control priority of a remote site if it requests control of a local camera in use by a local keyboard. The local operator will always be granted control over the remote operator.
Default = Off

Time and Date

The ZSC-1000 can be used to synchronise the time and date across a system.

Broadcast enable

Defines which ports a time / date signal is broadcast on.
Default = ZVM, ZVK and Intersite

Internal TDG

The ZSC-1000 has it's own time source which can be used to synchronise the system. If this box is ticked, a time signal is broadcast on the hour, based on the current time held in the unit
Default = Off

Clock - Port

This defines the source that the unit will accept a time/date signal on. Any of the ports can be set as the source
Default = Zvk

Clock - Clock

This defines the protocol of the time/date signal. This can be one of ZoneVu, Wharton, None or Wharton-old
Default = ZoneVu

Notes

If *Port* is set to PC1 or PC2, selecting one of the Wharton formats under *Clock* automatically selects the correct protocol on that port.
Wharton-old is only supported on PC1 port.

Timed Events

Timed events are specific events (actions) that can be programmed to occur at specific times.

For each timed event, in the range 1 to 128

Type

The function type. For each function the 3 fields can have different meanings

- **Preset** : Send a camera to a preset position
 - Field 1 = Camera
 - Field 2 = Preset
 - Field 3 = Site
- **Walk** : Start a camera's mimic patrol
 - Field 1 = Camera
 - Field 2 = Mimic
 - Field 3 = Site
- **Patrol** : Start a camera's ordered patrol
 - Field 1 = Camera
 - Field 2 = Patrol
 - Field 3 = Site
- **Random patrol** : Start camera's random patrol
 - Field 1 = Camera
 - Field 2 = (unused)
 - Field 3 = Site
- **Control** : Take control of (lock) a camera
 - Field 1 = Camera
 - Field 2 = Priority
 - Field 3 = Site
- **Relinquish** : Release control of (unlock) a camera
 - Field 1 = Camera
 - Field 2 = (unused)
 - Field 3 = Site
- **Switch** : Switch a matrix
 - Field 1 = Input
 - Field 2 = Output
 - Field 3 = Site

- **Alarm** : Trigger an alarm
 - Field 1 = Device (camera no/panel no/peripheral Mac)
 - Field 2 = Number
 - Field 3 = Type
 - 1 = Camera
 - 2 = Peripheral
 - 3 = Panel
- **Record** : Start recording
 - Field 1 = Vcr
 - Field 2 = (unused)
 - Field 3 = (unused)
- **No action**

Prompt index & Prompt enable

Not used.

Day

Select an individual day of the week, a combination of days, or every day.
Default = Every day

Hour

Select an hour for the event, or hourly operation.

- 0 – 23 to specify the hour
- 24 to trigger the event every hour

Default = 0

Minute

Select a minute

- 0 – 59 specifies the exact time

Default = 0

Sequences

The ZSC-1000 will run a number of camera sequences. Running a sequence on the ZSC-1000 allows remote cameras to be included in the sequence i.e. the sequence could be switching multiple matrices.

The screenshot shows the 'Sequences' configuration window. At the top, there are tabs: 'Sequences', 'Site Routing', 'Contact Alarms', 'VCR Ports', and 'Ca'. The 'Sequences' tab is active. Below the tabs, there is a 'Sequence number' field with a spinner set to 0. Below this is a larger box containing several fields: 'Position' (spinner 0), 'Max positions' (spinner 0), 'Dwell' (spinner 0), and a 'Static' section. The 'Static' section contains three sub-fields: 'Camera' (spinner 0), 'Site' (spinner 0), and 'Preset' (spinner 0). A vertical scrollbar is visible on the right side of the main configuration area.

For each sequence in the range 1 to 32 the following can be independently configured

Max positions

The number of positions in the sequence in the range 2 – 32.

A value of 0 disables the sequence. Sequence commands for disabled sequences will be forwarded on to the local matrix.

Default = 0

Dwell

The hold/dwell time between positions in the sequence.

In the range 1 - 65534 in units of seconds.

Default = 3

Static

The definition of the components of a sequence position.

Camera

Camera address. This will be checked against the Camera Mapping table.

Default = Position + 1

Site

Site address.

Default = 0

Preset

Where no preset is required (or the camera is static), the number should be configured as 255. For the Home position, the preset 0 should be entered.

Default = 255

Global Alarm

The ZSC-1000 incorporates a fully featured alarm handling system. It is fully configurable for alarm sources, alarm actions and alarm reports. See the Alarm Handling section for more information on how alarms operate.

Alarm Monitors

Up to eight alarm monitors can be configured to display alarms. Using the pull down menu to the right, select between 'Number' and 'Group' to configure each parameter as follows:

Number

The matrix outputs (monitor numbers) to be used.

The monitors will be used in the order they appear on screen (left to right) for each successive alarm event.

Set unused positions to zero.

Default : 1 = 1, 2 to 8 = 0

Group

Enter a group to specify that a monitor should only display alarms with a matching group number.

Enter group zero (default) to allow all alarms to display on a monitor, regardless of their group.

Default = 0

Alarm VCRs

The list of alarm recorders to which on which an alarm event will be automatically recorded. The next free VCR is used.

Address

The address of the VCR that will be requested to start recording

Default = 0

Monitor

The output of the local matrix that the VCR records from.

Default = 1 to 8

Alarm Queue

Defines the format of the alarm queue that new alarms are stored in whilst waiting to be acknowledged by the operator

Sort by priority

If ticked, the alarm queue is sorted on alarm priority.

If not ticked, the alarm queue is managed as a first in first out queue.

Default = Off

Queue size

The maximum number of items that can be held in the alarm queue, in the range 0 to 100.

Setting the value to 0 effectively turns off the alarm handling.

Default = 100

Remote reporting

It is possible to report alarms to a remote site (often used in central monitoring type scenarios)

Remote site

The site number of the target site for the alarm to be reported to.

A value of zero turns remote reporting off.

Default = 1

Trunk output

The output trunk used to pass the alarm video to the remote site.

Default = 1

Timings

A set of timeouts, in units of seconds, to control the automated functionality of the alarm handler.

A value of 0 disables the timer.

Accept time

The time after an alarm is accepted, before pool resources are automatically released.

Default = 5 seconds

Cancel time

The time after an alarm source clears itself, before it is automatically cancelled.

Default = 20 seconds

Postpone time

The time that an alarm is postponed for, before it is re-reported

Default = 5 minutes

Default event enabled

It is possible to set up a default alarm event that will be actioned if the raised alarm has not been defined.

The Default alarm event is event number 500. Note that device fail alarms are not handled by the default event.

Default = off

Pass through

If pass through is enabled then alarms will not be handled by the ZSC-1000 but will be passed through to the PC2 port.

Note : only alarms that have been configured using the **Alarm** section will be passed through, however this configuration will have no further effect.

Default = off

Cancel enable

Automatically cancels the alarm if the alarm source clears itself

Default = off

Alarm

The ZSC-1000 incorporates a fully featured alarm handling system. It is fully configurable for alarm sources, alarm actions and alarm reports. See the Alarm Handling section for more information on how alarms operate.

Alarm definition

An alarm is individually identified by three values:

Type

Alarms are classified in three different types

Camera: all alarms generated at a camera receiver

Panel: alarms generated by contact alarm, or third party serial alarm panels

Peripheral: typically alarms generate through ZVS-MSI-xxx interfaces from e.g. DVRs

Alarm Config Site

The site the alarm originated from.

Default = Local

Device

The alarm device usually indicates the address of the device generating the alarm, depending on the type of the alarm. Device 0 represents all devices of a particular type (i.e. global mapping)

Default = 0

Number

The actual number of the alarm circuit on the alarmed device. Number 0 represents all alarms on a particular device(i.e. global mapping)

Default = 0

For each alarm, in the range 0 to 499 :

Event

The alarm event number associated with this alarm. This event will be actioned on this alarm being raised. Multiple alarms can all reference the same alarm event

Default = 0

Priority

The priority that this alarm should have , in the range 1 to 8

Default = 1

Group

Assigns a group number to the alarm. This group number will be used to determine which alarm monitors will be used to display the alarm.

An alarm can only belong to one group. Alarms that are listed for multiple events will take their group number from their first entry in the list.

See *Global Alarm* section for further details on alarm monitors.

Default = 1

Alarm Events

The ZSC-1000 incorporates a fully featured alarm handling system. It is fully configurable for alarm sources, alarm actions and alarm reports. See the Alarm Handling section for more information on how alarms operate.

Alarm events are the actions that can be configured to occur on the raising of a new alarm. For each alarm event, in the range 0 to 500

Alarm Action

Record

If enabled a VCR record command will be sent
Default = Off

Switch

If enabled the event camera will be switched to an alarm monitor
Default = On

Primary Action

Action

One of the following actions can be performed on the selected camera (No action, Preset, Walk, Patrol, Random, Relay On, Relay Off, Relay Pulse, Set Mode)
Default = No action

Note: Relay Actions

If the Primary Action Camera is on a remote site, the relay is also actioned remotely.
Relay Pulse – Relay will switch on and then switch off after 1 second.
The Relay number is entered via the field entry box.

Camera

Camera for the selected action
Default = Event number

Field

The number associated with the action e.g. Preset number
Default = 0

Global

If enabled the action is performed on all cameras at this site
Default = Off

Use Alarm Camera

If enabled the action is carried out on the camera that is the source of the alarm (rather than configuring a specific camera). This way it is possible to have one event for a range of cameras and have the event carried out on the camera that is the source of the alarm.
Default = Off

Secondary Action

Relay mask

Unused

Post Action

Action

One of the following actions can be performed on the selected camera (No action, Preset, Walk, Patrol, Random, Relay On, Relay Off)

For preset, home position will be used; for Walk & Patrol number 1 is used.

For Relay On / Off, the relay number of the primary action is used.

Default = No action

Report

Keyboard

The keyboard that this alarm event is reported to. A number of values have special meanings

- 0 : all
- 99 : All workstations (e.g. Fusion)
- 100 : No reporting
- 101 – 127 : Site 1 - 27

Default = 99

Remote Site

Report the alarm to a remote site (specified in global alarm section)

Default = Off

Notes

If no reporting is specified for all events assigned to an alarm, it will not be seen by any operator and cannot therefore be cancelled. Such alarms will not be placed on the alarm Queue.

An event with no actions or reporting specified can be used to exclude alarms from a global mapping. When a blank event is assigned to an alarm, any events assigned further down the alarm list will be ignored.

Contact Alarms

The ZSC-1000 will poll ZoneVu Alarm cards for alarms. The ZSC-1000 can be configured for these alarms to be either normally open or normally closed.

Sequences	Site Routing	Contact Alarms	VCR Ports
Card Number: 0			
Alarm card - NO / NC			
offset: 0	<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/> 17
	<input type="checkbox"/> 2	<input type="checkbox"/> 10	<input type="checkbox"/> 18
	<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/> 11	<input checked="" type="checkbox"/> 19
	<input checked="" type="checkbox"/> 4	<input checked="" type="checkbox"/> 12	<input checked="" type="checkbox"/> 20
	<input type="checkbox"/> 5	<input type="checkbox"/> 13	<input type="checkbox"/> 21
	<input type="checkbox"/> 6	<input type="checkbox"/> 14	<input type="checkbox"/> 22
	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 15	<input checked="" type="checkbox"/> 23
	<input checked="" type="checkbox"/> 8	<input checked="" type="checkbox"/> 16	<input checked="" type="checkbox"/> 24
		<input checked="" type="checkbox"/> 25	<input checked="" type="checkbox"/> 26
		<input checked="" type="checkbox"/> 27	<input checked="" type="checkbox"/> 28
		<input checked="" type="checkbox"/> 29	<input checked="" type="checkbox"/> 30
		<input checked="" type="checkbox"/> 31	<input checked="" type="checkbox"/> 32

For each alarm card, in the range 0 to 14

Alarm card NO/NC

Default = Off

Camera Barring

Camera barring allows camera ranges, either locally or across sites, to be barred to some operators. When a camera is included in one of the 20 ranges, it can only be selected by operators who meet the priority criteria.

To make a camera available to several individual priorities, it can be included in more than one range.

When a barred camera is selected, as well as notifying the keyboard, the site controller will either leave the current monitor selection, or switch to a fixed input. This behaviour is defined in the *Enables* section.

Note : Camera barring does not apply to the highest priority level of 9.

For each camera bar, in the range 0 to 19

Site

The site where the cameras to be barred are located.

Default = 0

First Camera

The first camera number in the range

Default = 0

Range

The range of the cameras being barred

Default = 0

Priority

Either :

The lowest priority user that can access these cameras

Or :

The exact priority required to access these cameras

Default = 0

Exact Priority Only

If enabled, the exact priority level specified is required to control the cameras

Default = Off

System Reset

1. The application has a number of check procedures built-in and will automatically reboot if it detects an inconsistency in its data. This will allow the unit to recover. An active operator would only detect a short delay and a momentary lag in operation

Maintenance

The ZSC-1000 requires no Planned Preventive Maintenance periods (PPM's) as it is mainly solid state in design.

The ZSC-1000 contains no serviceable parts and should be returned to our Service Centre in Scunthorpe for repair or replacement under warranty. Any repairs, attempted repairs or replaced components not carried out by the Meyertech Service Centre will void all Meyertech warranties and liabilities.

If your ZSC-1000 has to be returned to our Service Centre please follow the returns procedure below, otherwise delays may be incurred in returning or replacing the ZSC-1000.

Returns Procedure

Prior to returning your ZSC-1000.

1. Contact our Service Centre by phone on (+44) 0161 6437956 or by email tech-support@meyertech.co.uk for a Goods Return Number.
2. The GRN will be logged by our staff along with the reported problem.
3. Pack the ZSC-1000 into the original packing it was delivered in. Failure to do so means the unit may incur further damage in transit, which Meyertech cannot be responsible for.
4. Organise delivery of the ZSC-1000 back to our Service Centre in Scunthorpe. Use a reputable carrier, as again Meyertech cannot accept liability for loss of goods in-transit.
5. On receiving the ZSC-1000 our staff will, after initial examination advise of the course of action we intend to take.
 - a. Repair the ZSC-1000 under warranty. The ZSC-1000 will be repaired and returned to you free of charge.
 - b. Replace the ZSC-1000 under warranty. The ZSC-1000 will be repaired and returned to you free of charge.
 - c. Repair the ZSC-1000 at a quoted cost. An official purchase order to cover the cost and return of the product will be required prior to commencement of repair.
 - d. Advise you that the ZSC-1000 is not repairable. You can then decide to have the product returned to you at the standard delivery charge or we can dispose of the product free of charge.

Disposal

There are no additional requirements beyond safe working practice in the decommissioning of the Meyertech ZSC-1000.

However the ZSC-1000 contains printed circuit boards populated with electronic components. The whole unit must be returned to **Meyertech Service Centre** for final disposal. Please follow the normal returns procedure.



Meyertech Limited is a member of the CCTV User Group.

Support

At Meyertech our staff understand quality support is important to you, vital in fact, which is why we place such a high precedence on providing it.

For all matters relating to support go to our website to find the information your require visit <http://www.meyertech.co.uk/support.html>

Meyertech offer Extended Support Contracts on all their software products. Please contact our Sales department on 0161 643 7956 to discuss your requirements or visit our website www.meyertech.co.uk

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Warranty

Please refer to Meyertech Limited 'Terms & Conditions of Sale of Goods & Services' for interpretation.

1. If the Buyer establishes to the Seller's reasonable satisfaction that there is a defect in the materials or workmanship of the Goods manufactured, then the Seller shall at its option, at its sole discretion and within a reasonable time,
 - a. arrange for the repair or making good such defect or failure in such Goods free of charge to the Buyer (including all costs of transportation of any Goods or materials to and from the Buyer for that purpose),
 - b. replace such Goods with Goods which are in all respects in accordance with the Contract, or

subject, in every case, to the remaining provisions of this Condition 1 provided that the liability of the Seller under this Condition 1 shall in no event exceed the purchase price of such Goods and performance of anyone of the above options shall constitute an entire discharge of the Seller's liability under this warranty.

2. Condition 1 shall not apply unless the Buyer:
 - a. notifies the Seller in writing of the alleged defect within 12 (twelve) months from delivery or such other period or periods as may be agreed in writing between the Seller and the Buyer, and
 - b. allows the Seller a reasonable opportunity to inspect the relevant Goods.
3. For the avoidance of doubt, the Seller shall be under no liability under the warranty in Condition 1 above:
 - a. where such defects arise from any drawing, design or specification supplied by the Buyer; or
 - b. where such defects arise from fair wear and tear, wilful damage, or negligence of a party other than the Seller (or its employees or authorised personnel), abnormal working conditions, failure to follow the Seller's instructions (whether oral or in writing), misuse or alteration or repair of the Goods without the Seller's approval; or
 - c. where such defects arise in parts, materials or equipment which have not been manufactured or designed by the Seller but have been purchased at the Buyer's request by the Seller from the Buyer's designer and manufacturer or from some other third party (the "**Third Party Supplier**").
 - d. if the total price of the Goods has not been paid by the due date for payment
 - e. in respect of any type of defect, damage or wear specifically excluded by the Seller by notice in writing: or
 - f. if the Buyer makes any further use of the Goods after giving notice in accordance with Clause 1
4. Any repaired or replaced Goods shall be redelivered to the Buyer free of charge to the original point of delivery but otherwise in accordance with and subject to these Conditions.
5. Alternatively to Condition 1 the Seller shall be entitled at its absolute discretion on return of the defective Goods to the Seller (at the Seller's request) to refund the price of the defective Goods in the event that such price shall already have been paid by the Buyer to the Seller, or, if such price has not been paid, to relieve the Buyer of all obligation to pay the sum by the issue of a credit note in favour of the Buyer in the amount of such price.
6. In respect of all Goods supplied to the Seller by a Third Party Supplier the Seller will on request pass on to the Buyer (in so far as reasonably possible) the benefit of any warranty given to the Seller by such Third Party Supplier and will (on request) supply to the Buyer details of the terms and conditions of such warranty and copies of any relevant product information sheets, technical data sheets or product leaflets issued by such Third Party Supplier and the Buyer shall be solely responsible to the entire exclusion of the Seller for complying with the same.
7. For the purposes of Condition 1 references to Goods shall be deemed to exclude software.
8. The Buyer acknowledges that software in general is not error-free and agrees that the existence of such errors in the Software Programs shall not constitute a breach of this Contract.
9. In the event that the Buyer discovers a material error which results in the Programmed Products not performing substantially in accordance with the Functional Specification, or the Licensed Programs not performing substantially in accordance with the relevant Program Documentation and notifies the Seller of the error within 90 days from the date of the Seller making available the respective software to the Buyer (the "**warranty period**") the Seller shall at its sole option either refund the price which the Buyer has paid to the Seller (or if such price has not been paid, relieve the Buyer of all obligations to pay the sum) in respect of the respective software or use all reasonable endeavours to correct by patch or new release (at its option) that part of the software which does not so comply provided that such non-compliance has not been caused by any modification, variation or addition to the software not performed by the Seller or caused by its incorrect use, abuse or corruption of the software by use of the software with other software or on equipment with which it is incompatible,
10. To the extent permitted by English law, the Seller disclaims all other warranties, with respect to the software which it provides pursuant to the Contract, either express or implied, including but not limited to any implied warranties of satisfactory quality or fitness for any particular purpose.
11. The Buyer is solely responsible for various scanning the software that it receives from the Seller pursuant to the Contract.
12. The Seller warrants that it will use reasonable skill and care in providing the Services to the buyer